

## REPORT OF FINDINGS

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Human beings are deeply and inexorably connected with nature and with all living things. Kellert and Wilson (1993) in the *Biophilic Hypothesis* suggest that throughout our evolution as human beings we are compelled to be connected with the natural world, that we have a basic human need to affiliate with other forms of life and that our current treatment of the natural world is an indicator of our mental and physical health (for better or worse). There exists considerable evidence that connections with the natural world benefit us in ways physically, psychologically and emotionally. Naturally attractive views or even pictures of nature provided hospital patients contribute to improved outcomes and shorter post-surgery stays (Ulrich, et. al, 2008). The *Children and Nature Network* (<http://www.childrenandnature.org/>) offers a vast number of research findings documenting a wide range of benefits of contact with the natural world for young children including significant reductions of symptoms of attention deficit disorder, increased abilities to focus and problem-solve, improved social connections, better self-control, self-discipline and self-esteem, decreased stress and anxiety, and more creative and cooperative forms of play. Yet children between 3 and 12 years of age today spend less time playing outdoors than any previous generation, with crime and safety concerns noted as the primary reasons mothers do not allow children to play outdoors (Clements, 2004). Nutritional issues aside, with time outdoors dramatically diminished, increased time spent with electronic media (television, computers and the internet) and a growing preponderance of parent-initiated events, adult-directed activities, formal after school lessons and over scheduling dominating children's lives, the *Centers for Disease Control and Prevention* (2011) has noted both a dramatic increase in childhood depression and a tripling of obesity rates over the past 30 years and now make specific recommendations for increasing time for outdoor play to improve child physical and psychological outcomes. Lack of time outdoors has become a public health issue.

Richard Louv (2006) raised public consciousness of the issues at hand with his publication of *Last Child in the Woods*. His reference to "nature-deficit" in young children underscores the growing divide between children and the outdoors and suggests that this growing trend requires an approach similar to other public health initiatives that have been implemented over the years to eradicate disease. In his

follow-up book, *The Nature Principle*, Louv (2011) notes that “the future will belong to the nature-smart... those individuals, families, businesses, and political leaders who develop a deeper understanding of the transformative power of the natural world and who balance the virtual with the real. The more high-tech we become, the more nature we need.” Intrinsic aspirations that include prosocial behaviors (such as generosity) and other-focused value orientations (versus extrinsically-driven self-serving orientations) appear to be greatly enhanced with exposure to the natural world (Weinstein, Przybylski and Ryan, 2009). Getting more in touch with ourselves and more fully accounting for and actually caring about the needs of others are immensely important by-products of additional time in the natural world. Outdoor time is not only good for the individual, it’s good for the larger society. Virtual worlds cannot (and should not) replace real experiences. We can and must do more to reconnect children with the outdoors, but parks and reserves, even botanical gardens and zoos can only offer a limited means of such reconnection. Pyle (2003) notes “it is the opportunity for the young to explore, dig, prowl, play, catch and ultimately discover among indigenous local plants and animals that truly forges connections (with the natural world). In this sense, a vacant lot may be more valuable than a nature reserve or arboretum.” Something essential to truly being human comes up missing the more we distance ourselves from the natural world. “Direct, personal contact with other living things affects us in vital ways that vicarious experience can never replace” (Pyle, 2003). If we are to account for the larger environmental issues of global warming, aquifer depletion, toxic contaminations, dependency on fossil fuels and the ecological damage that can result, and pursue the quest for alternative and renewable sources of energy, we ought to begin by fostering a simple appreciation for and a deeper understanding of nature in each and every young child. It’s ethically, aesthetically, psychologically and, ultimately, economically the right thing to do. Like a pebble dropped in a pond, the resulting ripples are bound to have far reaching effects.

If spending time in nature is an important component of human health and development, it behooves us to develop the means and methods to support such in the earliest ages of life. While traditional playgrounds can confine children to specific activities and limit creative play, natural playscapes can have positive impacts on intellectual, social, physical and creative development. Studies conducted in Telemark, Norway noted that children 3-12 years of age who played in natural playspaces versus those children who played in traditional playgrounds performed higher on standardized motor skill tests, exhibited improved balance and coordination and demonstrated higher levels of imagination and creativity through the use of unstructured playscapes, loose materials and natural objects (Fjortoft, 2004). Incorporating natural elements

within traditional children's playgrounds is a beginning endeavor, and an essential contributor to reconnecting children with the natural world. Many of the developmental tasks of early childhood, including exploring, inventing, risk-taking, testing, creating and absorbing vast amounts of knowledge are best accounted for in the outdoors (Johnson, Christie and Wardle, 2005). *The Outdoor Classroom Project* ([http://www.ceconline.org/outdoor\\_classroom\\_project/index.aspx](http://www.ceconline.org/outdoor_classroom_project/index.aspx)), now in its eighth year, underscores the benefits of outdoor experiences for young children, offers seminars and trainings in support of teacher's efforts to engage children in outdoor learning, and has impacted literally hundreds of early care and education programs throughout Southern California through the *Outdoor Classroom Demonstrate Site Network*. The co-founder of the project, Erik Nelson (2012), offers many ways in which practitioners can transform their teaching and children's learning by transforming their teaching environments to incorporate the outdoors. Likewise, entrepreneurs like Rusty Keeler (2008) with *EarthPlay* (<http://earthplay.net/>) have capitalized on the current interest in outdoor learning environments by offering innovative and natural playscape design and construction, and his work has been embraced by both private and public organizations and agencies across the country. His website offers individuals and groups resources to find materials, legal ordinances and regulations, books, grants, case studies and project plans, and he is one of a growing number of professionals who are now creatively and effectively connecting the disciplines of child development, architecture, and landscape design to create natural learning environments for young children.

Design indicators of program quality certainly must include those that support emotional well-being, promote curiosity, stimulate senses, challenge motor skills and account for the common constructs of safety, minimum licensing regulations, general environmental rating scales and developmental appropriateness (Kalinowski, 2007). However, the current natural play movement also calls for a renewed look at the impact of the learning environment on our senses, our aesthetics and our ability to wonder. When one is in a new, intriguing and less predictable environment, one tends to view things with a fresh perspective and pay closer attention to the multitude of invitations to discover and invent. Such approaches to the design of natural learning environments factor in not only the individual objects within the space, but the relationships developed within and between the objects and the individuals engaging the space, what the French theorist and curator Nicholas Bourriaud be termed *relational aesthetics* (Browne, 2008). Children are very in tune with the natural world, keen to the relationships among objects and appreciative of the quality of the materials and the invited interactions, not yet having grown the layers of insulation, trepidation and fear of the unknown that too often characterize their adult counterparts. In fact, left to their

own, it is quite likely that young children would design playgrounds inherently different than those currently designed by adults, incorporating captivating landscapes, unique vegetation, dirt, sand, water, trees and rocks in ways that would encourage their play and exploration *all day*... and not altogether unlike the very places their parents played as children a generation ago! These natural elements within play settings encourage open-ended play and emphasize unstructured creative explorations with diverse materials (White and Stoecklin, 1998). Reclaiming and recreating such spaces for play and learning is what the current movement is all about.

Danish landscape architect Helle Nebelong (2008) is devoted to improving children's quality of life through innovative design, including outdoor spaces and sensory gardens. She has provided specific focus to the design of such spaces for children with disabilities, noting the importance of designing accessible and developmentally appropriate, aesthetically engaging spaces that work for all children irrespective of abilities and skills. While themes and possibilities for play are introduced by adults within the design of the playspaces, it is the children's imaginations that "give colour to their play" and bring things to life. Nebelong (2004) emphasizes that children do not like bland, risk-free playgrounds and, in fact, search out settings in which to play where they can be challenged physically, psychologically and socially. While safety must always be accounted for within the design of playspaces for young children, some common sense may also be in order.

Concerns for child safety and (perhaps even more salient) issues of liability have dramatically framed the debate over the balance of risk and benefits in children's play for the past two decades (Sandeseter, 2009). Risky play can be defined as that which tests limits, provides opportunities for challenge, explores boundaries, invites achievement, demonstrates skills and prowess, and allows children to overcome fears. Stephenson (2003) noted that four year-old children offered such opportunities tended to be acutely aware of their own skill level and competence and adjusted their explorations of the environment accordingly. Though the learning potential of risky play has long been acknowledged (Henniger, 1994; Jambor, 1986), the primary focus of playground design in recent years has been on safety rather than learning. Some have even suggested that many playgrounds are so "sanitized" that they have become too safe for real learning to occur (Tierney, 2011). Certainly efforts to eliminate unnecessary risks and dangerous components are important, but these very efforts to homogenize playgrounds may have unintended consequences. A predictable and standardized sequence of steps, the exact spaces between the rungs in a ladder or in a climbing net may not allow a child to concentrate when she places her feet. "Standardization is (actually) dangerous because play becomes simplified and the child does not have to

worry about his movements. The ability to concentrate on estimating distances, height and risk, for example, requires a lot of practice and is necessary for a person to cope successfully with life” (Nebelong, 2004). Sandeseter (2009) has noted that naturalized playspaces afforded more challenging play and engage children more actively than traditionally designed playgrounds. To underscore, a focus on safety is essential, but learning opportunities must hold equal sway in the design of children’s outdoor learning environments.

A review of literature in the area of risk and risk-management and children’s play revealed a great number of articles originated in the Commonwealth countries of Great Britain, Australia, New Zealand and Canada. My own observations of children’s outdoor play in the early childhood programs of New Zealand and Reggio Emilia, Italy revealed a tremendous faith on the part of teachers and parents alike in the abilities of young children to competently explore their world. This “high-trust model” presupposes that children are capable and resourceful and will tackle the challenges inherent in their environments within their individual abilities and competency levels. Consequently, outdoor learning environments in New Zealand and in Reggio Emilia are transformative and flexible, and are designed to include obstacles to overcome, spaces to transit, heights to achieve and distances to bridge. Barefoot two year-olds monkey-climbed up ramps and tiptoed across beams with teachers encouraging (and provoking) every step! It’s worth noting that New Zealand (as the other countries above) has a nationalized system of health care... if one gets hurt, one gets fixed! There are no lawyers or litigation involved. This changes the equation (and the approach) to designing innovative outdoor learning environments considerably. Incorporating and adapting such ideas within our own cultural context and our collective orientations toward children’s play remain key challenges, though both are essential outcomes. Avoiding risk altogether is not a solution. In so much as we are all ultimately interested in risk *management* rather than risk *elimination*, it behooves all involved to view risk as a social process and an essential endeavor in support of a wide range of positive developmental outcomes.

### ***Relationship to Campus Laboratory School Site Visits***

Nine exemplary centers in the California Community College and California State University systems were visited to examine their respective approaches to creating innovative outdoor learning environments (see Appendix D). Primary documentation included pictures of each center’s outdoor playspaces, with a focus on innovative features, natural components and unique orientations to outdoor learning. Consistent with the licensure and regulation of the Child Development Center at MiraCosta College, all of these centers minimally met Title 22 licensing standards (Department of Social

Services, Child Development Division) and all have passed annual playground safety inspections consistent with recommendations contained in the *Public Safety Playground Handbook* published by the US Consumer Product Safety Commission (CPSC) and the ASTM (American Society for Testing and Materials).

Results of these site visitations suggest that *all current licensing standards and outdoor playground safety and liability requirements can be met* while offering the children enrolled in campus-based child development centers increased opportunities for creative outdoor play that intentionally contains identified elements of risk and invention. Efforts will be devoted to creating proposals to modify the existing Child Development Center outdoor learning environments consistent with recommendations contained in the research literature and demonstrated within the exemplary campus laboratory schools visited. Components of such innovative yard design include:

- **Adjacency** - Play yards should always be adjacent to the children they are serving
- **Space** - Play yards should always be large enough to contain the full variety of activities children require for healthy development
- **Layout** - Open spaces should be large enough for children to run freely, with activity areas placed around the perimeter
- **Separation** - Yard layouts should separate and distinguish areas for different types of children's activities
- **Completeness** - A full range of activities is required for healthy development of the whole child
- **Materials/Equipment** - A wide variety of materials/equipment is needed, with emphasis on items children can manipulate ("loose parts")
- **Storage** - Adequate outdoor storage is needed to support the full variety of activities children require
- **Challenge** - Play yards should provide challenge sufficient to support development of the whole child; challenge is defined as "reasonable risk"
- **Nature** - Nature and the natural environment should be the dominant environment outdoors (including water, rocks, stumps, trees, gravel paths, plants and grasses)
- **Philosophy** - Quality play yards must be accompanied by a philosophy that supports and illustrates that philosophy